

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A display driver for driving data lines of an electro optic device based on display data, comprising:

a display data random access memory including a plurality of word lines, a plurality of column lines, and a plurality of memory cells each storing display data of one pixel;

a display address decoder selecting a word line of the display data random access memory based on a display address;

a display column address decoder selecting a column line of the display data random access memory based on a display column address;

a plurality of read-out bit lines each commonly coupled to a memory cell group specified by a corresponding column line;

a scroll bus coupled to the plurality of read-out bit lines;

a plurality of shift register latches outputting a plurality of shift outputs shifted based on a given shift clock, ~~the shift register including a plurality of shift register latches;~~

~~a line latch loading display data that are loaded in a plurality of data latches in one horizontal scan cycle;~~

~~the~~ a plurality of data latches, each of which corresponds to one of the data lines of the electro-optic device, the plurality of data latches loading display data on the scroll

bus, ~~each data latch~~ one of the plurality of the data latches being connected to the line latch and to coupled to one of a shift register latch of the plurality of shift register latches; and

and a driving circuit driving the data lines based on the display data loaded in the plurality of data latches;

display data of one pixel being read out from a memory cell specified by a word line selected by the display address decoder and a column line selected by the display column address decoder,

the display data of one pixel being output to the scroll bus via the read-out bit line coupled to the memory cell,

the display data of one pixel on the scroll bus being loaded in each one of the plurality of data latches,

the display data of one pixel being shifted from the scroll bus for storing in the plurality of data latches, and

each one of the plurality of data latches loading display data of one pixel on the scroll bus based on one of the plurality of shift outputs ~~of each stage of the shift register~~.

2. (Cancelled)

3. (Currently Amended) The display driver according to Claim 1, further comprising:

a line latch loading display data that are loaded in the plurality of data latches in one horizontal scan cycle;

the driving circuit driving the data lines based on display data loaded in the line latches instead of the plurality of data latches.

4. (Cancelled)

5. (Original) An electro optic device, comprising:

a plurality of scan lines;

a plurality of data lines;

a plurality of pixels coupled to the plurality of scan lines and the plurality of data lines;

a scan driver scanning the plurality of scan lines;

and the display driver according to Claim 1 driving the plurality of data lines.

6. (Original) An electro optic device, comprising:

a display panel including a plurality of scan lines, a plurality of data lines, and a plurality of pixels coupled to the plurality of scan lines and the plurality of data lines;

a scan driver scanning the plurality of scan lines;

and the display driver according to Claim 1 driving the plurality of data lines.

7. (Original) An electronic apparatus, comprising:

the electro optic device according to Claim 5;

and a display data generator generating display data to be supplied to the electro optic device.

8. (Currently Amended) A display driving method for driving data lines of an electro optic device based on display data that are read out from a display data random access memory including a plurality of word lines, a plurality of column lines, and a plurality of memory cells each storing display data of one pixel, comprising:

specifying a memory cell by a word line out of the plurality of word lines and a column line out of the plurality of column lines;

outputting display data of one pixel that are stored in the memory cell to a scroll bus via a read-out bit line commonly coupled to a memory cell group that is specified by the column line;

outputting a plurality of shift outputs shifted based on a given shift clock with a ~~shift register including a~~ plurality of shift register latches;

loading the display data of one pixel on the scroll bus in any of a plurality of data latches each corresponding to each one of the data lines ~~of the electro optic device~~, each one of the plurality of data latches ~~being connected to a line latch and coupled to~~ one ~~to a shift register latch~~ of the plurality of shift register latches,

the display data of one pixel being shifted from the scroll bus ~~being shifted~~ for storing in the plurality of data latches;

and driving the data lines of the electro optic device based on the display data loaded in the plurality of data latches.

9. (Previously Presented) The display driving method according to Claim 8, the step of loading the display data of one pixel on the scroll bus in each of the plurality of data latches being repeated for the number of pixels to be driven in one horizontal scan cycle so as to load display data of one horizontal scan line in the plurality of data latches, and the data lines of the electro optic device are driven based on the display data loaded in the plurality of data latches.

10. (Previously Presented) The display driver for driving data lines of an electro optic device based on display data according to Claim 1, with an image generated by loading the display data being scrolled in an oblique direction to upper right, upper left, lower right, and lower left by combining vertical scrolling and horizontal scrolling based on the data output to the scroll bus and based on the shift output of each stage of the shift register.

11. (Previously Presented) The display driving method according to Claim 8, with an image generated by loading the display data being scrolled in an oblique direction to upper right, upper left, lower right, and lower left by combining vertical scrolling and horizontal scrolling based on the shift output of each stage of the shift register.